



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/892,412	06/27/2001	Werner Hofmann	A34357 071308.0167	2801
31625	7590	10/12/2005	EXAMINER	
BAKER BOTTS L.L.P. PATENT DEPARTMENT 98 SAN JACINTO BLVD., SUITE 1500 AUSTIN, TX 78701-4039			HEITBRINK, JILL LYNNE	
			ART UNIT	PAPER NUMBER
			1732	

DATE MAILED: 10/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/892,412

Applicant(s)

HOFMANN, WERNER

Examiner

Jill L. Heitbrink

Art Unit

1732

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 September 2005.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5, 8-10, 12, 13 and 18-30 is/are pending in the application.
4a) Of the above claim(s) 4, 5, 9, 12, 13, 18, 22-25 and 30 is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-3, 8, 10, 19-21 and 26-28 is/are rejected.
7) ☒ Claim(s) 29 is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on September 6, 2005 has been entered.

Election/Restrictions

2. Claims 4, 5, 9, 12, 13, 18, 22-25 and 30 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on Nov. 6, 2003. Applicant elected species A which is control of plastic injection molding machine speed and pressure, paragraph [0006].
3. Claims 22-25 are labeled as "(Previously Presented)". However, claims 22-25 are **Withdrawn**.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Art Unit: 1732

5. Claims 1, 2, 8, 10, 19-21 and 26-28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
6. Claim 1, line 7 "unit" should be defined so as not to be confused with other units within the claims, i.e. control unit, first determination unit. Also, claim 19, line 2 is unclear as to which "unit", but will be examined as referring to the unit in claim 1, line 7.
7. Claim 8 is depending from cancelled claim 7. Claim 8 is being examined as being dependent from claim 3. Claim 8, line 2 "the pressure profile" should be changed to --the pressure/displacement profile--.
8. Claim 10 is unclear as to what is used to determine the first setpoint and the first internal variable since lines 3-5 contradict lines 9 and 10.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claims 1, 2 and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Hiraoka Pat. No. 5,371,450.
11. As to claim 1, Hiraoka discloses an injection molding machine including a drive (servomotor 11) for the screw (12), a control unit 30 and detectors for determining at least a first (position from 25) and a second (pressure from 18) variable fed to the

Art Unit: 1732

control unit. The control unit comprises a first determination unit (24-1) receiving the first variable S_z for generating a first setpoint S_d . A unit for generating an intermediate setpoint S_y from the first variable S_z . The intermediate set point being corrected by the second variable (pressure from 18 sent through the pressure control compensator 30-2) to generate a second setpoint S_v . The machine control unit (24-5, 24-6) receives the first and second setpoint to generate a machine control parameter S_g .

12. As to claim 19, a third variable such as time is used in Hiraoka to determine velocity. The second determination unit comprises a first unit for generating said first internal variable (variation detecting unit), and a second unit for generating a second internal variable (velocity) from the third variable (time), and a select unit (51) controlled by a threshold (velocity) derived from the first variable for selecting the first or second internal variable for generating the intermediate setpoint.

13. Claims 3 and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Hiraoka Pat. No. 5,371,450.

14. Hiraoka disclose an injection molding machine for molding plastic parts comprising a motor 11 driven advancing screw 21 for driving the injection and generating an injection pressure (load cell 23). The machine includes means for detecting and registering the injection pressure (load cell 23) and position (25) of the screw as measured variable during operation of the injection molding machine. The control means generates a first setpoint S_y from the position variable S_z by a speed/displacement profile (24-2 and 24-3) and a first intermediate pressure variable (output of 51) from the position variable (used in units 55, 60 and 70) by a pressure

Art Unit: 1732

profile S_r which is changed during different stages of injection (col. 9, lines 42-62). The first intermediate pressure variable is corrected by the pressure variable to generate (within unit 51 and 30-2) a second setpoint S_q . The first and second setpoints are fed to a machine control unit 30-3 for generating a motor control parameter for the motor. A time variable is used in Hiraoka for determination of velocity and the pressure setting.

15. Claims 10 and 26-28 are rejected under 35 U.S.C. 102(b) as being anticipated by Hiraoka Pat. No. 5,371,450.

16. Hiraoka discloses determining a first setpoint S_y from the first variable S_z . An intermediate setpoint (output of 51) is determined from a first internal variable (gain) derived from the first variable S_z in the operation mode setting unit. The intermediate setpoint is corrected (within the pressure control compensator 30-2) with a second variable S_p to generate a second setpoint S_q . The first setpoint is determined by a speed/displacement profile (generated and subtracted in 24-2 and 24-3). The first internal variable is determined by a pressure/displacement profile S_r which is changed during different stages of injection (col. 9, lines 42-62). A second internal variable (gain in unit 51) is determined based on time and the pressure profile (units 60 and 70). The threshold is based on velocity which is determined from the first variable. The second variable is subtracted from the selected first or second internal variable to generate the second setpoint within the position control compensator 30-2 see Hiraoka (col. 6, lines 55-62).

17. Claims 1, 2, and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Fujita et al. Pat. No. 5,595,693.

Art Unit: 1732

18. Fujita discloses a hydraulic drive controlled by a control unit. A first, second and third variable are detected, (position 36, pressure 34, time). The first variable is used to determine a first setpoint which is sent to the injection speed control unit. An intermediate setpoint is generated from the first variable (36) and corrected by the second variable (from comparator) to the memory unit and the injection speed calculating unit wherein the corrected second setpoint is sent to the injection speed control unit 40 to generate a machine parameter. The comparators use a time or position function to generate a first internal variable and a second internal variable from the third variable (output from each comparator). A select unit select the internal variable based on a threshold as shown in Fig. 3 of Fujita.

19. Claims 3 and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Fujita et al. Pat. No. 5,595,693.

20. Fujita discloses an injection molding system including a motor driven advancing screw (30) for driving the injection and generating an injection pressure. The injection pressure (34) and screw position (36) are detected and registered in the control unit. The comparator uses a pressure/displacement profile to determine the correction based on the screw position and the correction is bed to the injection speed calculating unit with the speed/displacement profile (at least the first is predetermined in injection speed characterizer 46) from the memory unit to determine the setpoints for the determined in the injection speed control unit (col. 7, lines 15-37).

21. Claims 10, 26-28 are rejected under 35 U.S.C. 102(b) as being anticipated by Fujita et al. Pat. No. 5,595,693.

Art Unit: 1732

22. Fujita discloses a process for controlling an injection molding machine including determining a first setpoint from a first variable and a speed/displacement profile (steps 1 and 2), determining an intermediate setpoint from a first internal variable derived from the first variable and a pressure/displacement profile (col. 1, line 64- col. 2, line 1). The intermediate setpoint is corrected with a second variable to generate a second setpoint (correction setpoint), (col. 2, lines 3-10), this would have been performed in or through a function unit since the injection speed control unit would send a setpoint to the hydraulic fluid flow control unit. The injection speed control unit is controlled by a parameter from the injection speed characterizer which receives the distance 36 which determines a threshold (col. 6, lines 33-50). The injection molding speed is generated from the first setpoint and the correction second setpoint (col. 2, lines 16-20). Fujita discloses the selecting of either the first or second internal variable for determining the intermediated setpoint (col. 1, line 64-col. 2, line 1) as the depending on a threshold in the comparators 20A, 20B, 20C, 20D (col. 6, lines 21-46).

Allowable Subject Matter

23. Claims 20 and 21 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims. The prior art does not teach the additional structure of the control unit with a subtraction unit for subtracting the pressure variable from the internal variable which is fed to the function unit generating the second setpoint.

24. Claim 29 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The prior art does not teach the generating of a second intermediate pressure variable from the time variable, in combination with the first intermediate pressure variable generated from the position variable by a pressure/displacement profile.

Response to Arguments

25. Applicant's arguments filed Aug. 5, 2005 and September 6, 2005 have been fully considered but they are not persuasive.


26. Applicant argues that Hiraoka does not disclose the correction of the intermediate setpoint by the second variable. Claim 1 has been amended such that the second variable is the injection pressure. Hiraoka discloses the detected pressure variable S_r being sent to the function unit 24-7 which is fed the velocity based on the position variable (Fig. 2). Additionally, the detected pressure variable S_p is fed to the subtractor 30-1 (Fig. 3).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jill L. Heitbrink whose telephone number is (571) 272-1199. The examiner can normally be reached on Monday-Friday 9 am -2 pm.

Art Unit: 1732

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Colaiani can be reached on (571) 272-1196. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Jill L. Heitbrink
Primary Examiner
Art Unit 1732

jlh